Biotin Conjugated Anti-Human SIRP alpha Antibody [PSH17-64] - Detector

HA725348B

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det), ELISA
Clone number:	PSH17-64

Description: Signal regulatory protein α (SIRPα) is a regulatory membrane glycoprotein from SIRP family expressed mainly by myeloid cells and also by stem cells or neurons. SIRPα acts as inhibitory receptor and interacts with a broadly expressed transmembrane protein CD47 also called the "don't eat me" signal. This interaction negatively controls effector function of innate immune cells such as host cell phagocytosis. SIRPα diffuses laterally on the macrophage membrane and accumulates at a phagocytic synapse to bind CD47 and signal 'self', which inhibits the cytoskeleton-intensive process of phagocytosis by the macrophage. This is analogous to the self signals provided by MHC class I molecules to NK cells via Ig-like or Ly49 receptors.

Conjugate: Biotin-conjugated

Immunogen: Recombinant protein within Human SIRP alpha aa 31-369 (HA211204).

Positive control: Recombinant Human SIRP alpha protein (HA211204).

Subcellular location: Membrane.

Database links: SwissProt: P78324 Human

Recommended Dilutions:

ELISA(Det)	Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH17-63] to Human SIRP alpha antibody (Capture) (HA725347) and Recombinant Human SIRP alpha protein (HA211204) as the standard. The reference range value is 156-40,000 pg/mL.
ELISA	Use at an assay dependent concentration.

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.05% Proclean 300.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

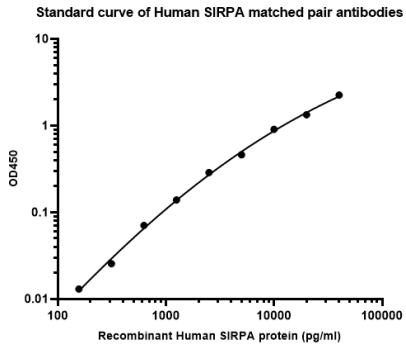

Fig1: Sandwich ELISA analysis of Human SIRP alpha matched pair antibodies

Capture: HA725347, Human SIRP alpha Rabbit mAb [PSH17-63]
Detector: HA725348, Human SIRP alpha Rabbit mAb [PSH17-64]

Elisa assay was performed by coating wells of a 96-well plate with 50 µl per well of capture antibody (HA725347) diluted in carbonate/bicarbonate buffer, at a concentration of 2 µg/ml overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant human SIRP alpha (HA211204) protein starting from 40,000 pg/ml to 0 pg/ml and detect antibody (HA725348, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 50 µl per well of SA-HRP for 0.5 hour at 30℃ with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

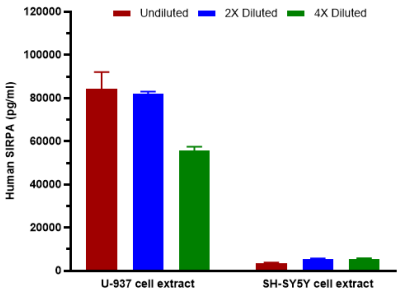

Fig2: Interpolated concentrations of native SIRPA in U-937 cell extract and SH-SY5Y cell extract:

Capture: HA725347, Human SIRP alpha Rabbit mAb [PSH17-63]
Detector: HA725348, Human SIRP alpha Rabbit mAb [PSH17-64]

The concentrations of SIRPA were measured in duplicates, interpolated from the SIRPA standard curve and corrected for sample dilution. Undiluted samples are U-937 cell extract 400 µg/mL and SH-SY5Y cell extract 400 µg/mL. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean SIRPA concentration was determined to be 73,992 pg/ml in U-937 cell culture supernatant and 4,844 pg/ml in SH-SY5Y cell extract.

Background References

1. Shen Q et al. Soluble SIRP-Alpha Promotes Murine Acute Lung Injury Through Suppressing Macrophage Phagocytosis. Front Immunol. 2022 May
2. Pan L et al. Lack of SIRP-alpha reduces lung cancer growth in mice by promoting anti-tumour ability of macrophages and neutrophils. Cell Prolif. 2023 Feb